DOCUMENT RESUME

ED 249 789 FL 014 615

AUTHOR Berman, Ruth A.; Dromi, Esther
TITLE On Marking Time without Aspect in Child Language.
INSTITUTION Stanford Univ., Calif. Dept. of Linguistics.
PUB DATE Sep 84
NOTE 11p.; In: Papers and Reports on Child Language Development, Volume 23, p23-32 Sep 1984. This research was supported by a grant from the United States-Israel Binational Science Foundation, Jersualem.
AVAILABLE FROM PRCLD, Department of Linguistics, Stanford University, Stanford, CA 94305 ($12.00 for entire volume; individual papers not available).
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Child Language; *Hebrew; *Language Acquisition; Semantics; Serial Learning; *Tenses (Grammar); *Time Perspective; *Verbs
IDENTIFIERS Aspect (Verbs)

ABSTRACT

A study of the acquisition of time-related grammatical forms in Hebrew-speaking children looked at three kinds of information: (1) relative frequency of occurrence of different verb forms at different ages; (2) the relationship between tense-marking on verbs and the semantics of verbs used at different ages, and (3) the use of time adverbs referring to present, past, or future as they interact, with verb forms. The data were drawn from 160 transcripts of adult-child interactions of 102 children aged 1.0 to 5.6 years. The basic unit of analysis was the grammatical constituent "clause." The overall results of the study confirmed previous case study findings on the centrality of imperative and infinitive forms in early verb usage. It was further noted that the three categories of present, past, and future do not correspond to three distinct slices of a timeline. The more relevant questions concern the patterning of deployment of each category by itself and in interaction with others, rather than their relative order of acquisition as children learn to mark time in their native languages. (MSE)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Stanford Univ.

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

X This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

PRCLD #23
1984

ED249789

FL014615

ON MARKING TIME WITHOUT ASPECT IN CHILD LANGUAGE*

Ruth A. Berman & Esther Dromi
Tel-Aviv University

The grammar of Modern Hebrew affords an interesting perspective on how children talk about time, for the following reasons at least. Firstly, there is no unequivocal basic or citation form of a verb in the language - comparable to, say, English walk, enjoy, understand. From the very start, children must inflect any verb they use for mood and/or for tense, choosing one of the five obligatory, mutually exclusive categories of Infinitive, Imperative, Present, Past, or Future. Secondly, verbs in Hebrew are inflected for tense and mood, but not for aspect. Such distinctions as durative/nondurative or perfective/imperfective are not part of the grammatical markings of the language today. Instead, if these categories are expressed overtly, it will be by lexical means such as aspectual verbs meaning begin, persist or adverbs like those meaning constantly, all the time, or through nonproductive verb-pattern alternation - e.g. rac 'run' vs. iterative mitrocec 'run around'. From this point of view, Modern Hebrew is very different from languages such as those in the Germanic, Romance, or Slavic groups, which mark both tense and aspect simultaneously, or Chinese, which marks aspect alone.

The development of temporal distinctions in Hebrew is of interest, inter alia because of recent claims that in the early phases of child language, aspectual distinctions have priority over temporal distinctions (as argued in a variety of studies reviewed in Bickerton 1981, Weist 1984). In the present context, we consider Hebrew development as typifying a case where in terms of surface grammatical marking, tense can be analyzed quite apart from aspect. Thus, the single Hebrew form, present-tense holex, corresponds respectively to English 'walks, is walking, has been walking' and, sometimes, also 'has walked', while past-tense halax could be used to render any of the following in English: 'walked, was walking, had walked, had been walking' and also 'has walked'.

Available data on the early verb usage of Hebrew-speaking children indicate that the first forms to emerge are the Infinitive and Imperative, both "nonfinite" categories (Berman 1978a, Dromi 1982, Kaplan 1983). Our interest here, accordingly, will focus on the emergence of the finite forms - Present, Past, and Future - as grammatical devices for encoding time. Studies on the acquisition of tense in languages other than Hebrew are not of much help in this respect, since they do not yield an unequivocal picture about the precise order of acquisition of the different tenses. It is generally agreed that Present occurs prior to Past and Future - a fact which has been explained in experiential and pragmatic terms (Sachs 1982) as well as on cognitive grounds (Harner 1980). But the evidence is contraversial with regard to the relative ordering of Past compared with Future tense. For instance, Harner's (1980) experimental study shows past to be

understood at an earlier age than future, while Ames' (1946) analysis of naturalistic speech output shows that future is used before past.

What, then, would we predict for Hebrew? One possible hypothesis is that order of acquisition relies on the principle of formal simplicity. However, we have argued in prior studies that the early emergence of nonfinite imperative and infinitive forms - in fact of Hebrew morphological markings in general - cannot be accounted for solely or even largely along these lines (Berman in press, Dromi 1982). Disregarding the factor of formal simplicity, we remain with two alternative sources of prediction. One relates to experiential factors such as the role of the "here and now" together with considerations of general conceptual development. This would yield the hypothesis that present will be encoded first, followed by either Past or Future - where the ordering of the latter would depend on one's a priori analysis of the relative cognitive complexity of these two time-stretches, and their respective roles in the linguistic experience of young children. The competing prediction ties in with the "defective tense hypothesis" (Weist 1984), which suggests that all three so-called tenses will emerge **concurrently**, being dominated by aspectual rather than by strictly temporal considerations. For Hebrew, which does not mark aspect on the verb, this could mean that some kinds of verbs - statives and other duratives, say - will occur initially in the present, and only in the present tense; other verb-types - for instance, punctual verbs -will occur at the same time exclusively in past tense; while yet others may at first favor future tense. This second prediction has strong consequences for our study, since it implies that the mere occurrence of a tensed form is not in itself clear proof that a given temporal distinction has been acquired. And even if present-tense forms are more common than past, this need not mean that present is acquired prior to either past or future.

In attempting to resolve such questions for Hebrew, we analyzed a corpus of free speech samples from several perspectives. With the aim of integrating **various** kinds of information relevant to how children deploy time-related forms, we took account of three parameters, thus:

1. Relative frequency of occurrence of different verb forms at different ages;
2. Relationship between tense-marking on verbs and the semantics of verbs used at different ages; and
3. Use of time-adverbs which refer to present, past, or future - as they interact with verb-forms.

Description of the Study

Our data-base consists of 160 transcripts of adult-child interactions, covering 102 different children in eight age-groups, from 1;0 to 5;6 years of age. The samples were elicited by several different adults - investigators and parents - who were uninformed as to the subject of the investigation. Transcripts ranged from 35 to over 500 clauses in length, yielding a total of 26,035 children's output clauses. Thus, we took as our basic unit of analysis the

grammatical constituent of "clause" rather than the more usual "utterance", since the latter does not lend itself to precise definition, and relies on detailed prosodic information of the kind not always available in our transcripts. Each clause was coded on three independent levels of structure: syntactic clause-type; verb-morphology; and lexical time-expressions (adverbs and conjunctions) - the last two of which are discussed below.

With regard to **verb-form**, we considered the five inflectional categories of: Infinitive, Imperative, Present, Past, and Future, as illustrated in Table 1 below.

Table 1 - Examples of verb-inflections in 5 common Hebrew verbs:(i)

ROOT	GLOSS	INFINITIVE	IMPERATIVE	PRESENT	PAST	FUTURE
g-m-r	finish	li-gmor	gmor!	gomer	gamar	yi-gmor
š-t-y	drink	li-shtot	shte!	shote	shata	yi-shte
y-r-d	go-down	la-redet	red!	yored	yarad	ye-red
ʔ-x-l	eat	le-exol	exol!	oxel	axal	yo-xal

(i) Examples are from a single conjugation (binyan pattern), the one by far most frequent in our sample. They are given in the morphologically simplest form of masculine singular, with past and future verbs in the unmarked 3rd person. Verb-conjugation and inflections for number, gender, person, are disregarded here.

Use of **time-expressions** was examined by reference to specific lexical items, as follows. All adverbs and conjunctions relevant to the expression of temporality in current Hebrew were subdivided into three main categories: Aspectuals, Temporals, and Connectives. Aspectuals are terms which refer to the internal properties of a situation - e.g. in English, *already, all the time*; Temporals are expressions which specifically local situations in time, either with respect to the moment of speech - e.g. *yesterday, next week* - or to some external reference point - e.g. *on Saturdays, in the summer*; while Connectives relate situations, and hence clauses, to one another sequentially - e.g. *later, as soon as*. In this analysis, we deal with only one subset of Temporals, namely, **deictic temporals**. These are terms which explicitly locate an event or situation in time relative to the moment of speaking (Fillmore 1975, Hornstein 1977). The deictic temporals included in our analysis were divided according to their realworld time reference, as follows: PRESENT - *axshav* 'now', *hayom* 'today', *karega* 'at-the-moment', *kayom* 'nowadays', *haboker* 'this-morning', *ha'erev* 'this-evening', *ha-shavua* 'this-week'; PAST - *pa'am* 'once', *etmol* 'yesterday', *mizman* 'long-ago', *shilshom* 'day-before-yesterday', *bashavua she'avar* 'last week', *lifney shavua* 'a week ago'; FUTURE - *od me'at* 'soon', *maxar* 'tomorrow', *moxratayim* 'day after tomorrow', *maxar baboker* 'tomorrow morning', *bashavua haba* 'next week', *be'od shavua/shana...* 'in (a) week/year...'.

Findings

Our first set of results describes the distribution of verb-forms for each age-group in the sample, as set out in Table 2 below.

Table 2 - Distribution of verb forms by age-group, in percentages:[ii]

Age-Group	No. of Vbs	Matrix Verb: Nonfinites INF	Nonfinites IMP	Tensed PRES	Tensed PAST	Tensed FUT	Unclear	2nd Verb INF	2nd Verb OTHER
I(1;0-1;5) #Cl = 1,544	[92]	14	21	30	8	3	20	3	1
II(1;6-1;11) #Cl = 2,421	[468]	11	16	49	14	3	3	4	-
III(2;0-2;5) #Cl = 5,007	[2,325]	4.5	18	40	21	7	3	6	0.5
IV(2;6-2;11) #Cl = 4,242	[1,758]	4	11	45	21	9	2	6	2
V(3;0-3;5) #Cl = 3,577	[1,533]	1.5	6	54	20	7	2	8	1.5
VI(3;6-3;11) #Cl = 4,139	[2,186]	2	7.5	46	20	15	1.5	7	1
VII(4;0-4;5) #Cl = 2,385	[1,489]	2.5	1.5	41	38	7	2.5	7	0.5
VIII(4;6-5;6) #Cl = 2,720	[1,838]	2	3	35	42	6.5	2	9	0.5

[ii] No. of vbs = total number of verb-tokens in that age-group, is given in brackets, disregarding inflections for number, gender, person, as well as bi-/tri-/an verb-pattern conjugations.
#Cl = total number of child output clauses in that age-group.

Several patterns emerge from these figures which are marginal to the main issues addressed in this study. Thus, the figures in the two first, leftmost columns reveal that relative to the total number of clauses for each age-group, the number of verb-tokens increases steadily with age. That is, at each age-level, children produce consistently fewer verbless utterances - from over 90% of all clauses of

the youngest children, down to only 40% of non-verb clauses by ages four to five. The occurrence of quite a large proportion of clauses with no overt verb even in the speech of older children can be attributed to the fact that present-tense copula sentences in Hebrew are verbless. Another general trend is revealed in the rightmost column, headed "second verb", where we see that the proportion of infinitives used as complement verbs also rises with age.

Our main concern, however, is with the breakdown of forms for matrix verbs. Table 2 shows that nonfinite infinitives and imperatives decrease consistently with age: They come to nearly a third of the verb-forms of the youngest children (28.8% in Groups I and II), whereas only some 5% of the forms in the top age-group are nonfinites. The youngest children also show a relatively large number of verb-forms listed as "unclear" or morphologically unanalyzable - as high as 20% in Group I. And the bulk of verbs used up to age two are either nonfinite infinitives and imperatives or present-tense - three forms which together account for 75% of all verbs in Groups I and II.

All three of the tensed forms - Present, Past, and Future - occur from the youngest age. Present-tense forms clearly predominate until age four years, when Past-tense attains the same level of usage (41% present as against 38% past-tense in Group VII). Finally, comparison of the three tenses reveals a clear linear development with age for the past forms alone. By contrast, verbs in present-tense and in future-tense are evenly distributed across the sample: Present forms account for around 40-50% from Group II on, while future tense occurs with under 10% of all verb forms in the entire corpus.[1]

The second facet of our analysis concerned the relation between verb-forms and verb-types, which we derived by grouping the verbs used at different ages in terms of semantic class-membership. We found that **present** forms occur more or less across the board for different classes of verbs - including modals and other statives, dynamic action verbs, transfer verbs such as those meaning 'put' or 'take', and even some punctual verbs. As for the **past**, up until two years of age, all of the different past-form verbs are action type verbs of the sort meaning 'did' or 'made', 'went', or 'happpened', with a slight favoring of more punctual verbs such as those meaning 'fell', 'arrived'. Thus, none of the early past-tense verbs are of the stative type, although such verbs are already used in nonfinite or in present-tense forms. From age two years and up, past-tense forms are used across a wider variety of semantic verb-classes; thus they account for a total of 91 verb-types in Group III compared with only 23 out of the 64 past-tense verb tokens in the previous age-group. Yet stative verbs like 'want' as well as physical-location verbs like 'sleep' or 'sit' are still rarely found in the past. It is only from around age four (Group VII and up) that the past tense is used much more flexibly: Past verbs manifest far greater lexical diversity, as revealed by a noticeable change in type/token ratio of past-tense forms, and past tense now occurs also with some stative verbs, like those meaning 'want', 'be-able', 'like'. As for **future** tense, we already noted that these were far less common than either present or

past. Yet across the sample, future forms were found to cover several different classes of verbs and, quite consistently, those verbs which are relatively frequent in the future are very common in past tense, too (e.g. verbs like those meaning 'do' or 'make', 'go', 'give', 'be' and also 'fall'). Use of future tense thus does not seem motivated by any obvious semantic factors.

Along with verb-form frequency and verb-class occurrences, we conducted a third test, to check the distribution of deictic time-adverbs like those listed earlier. Around 14% of all clauses in the sample contained one or more time-expressions of the three types we analyzed. Out of 3,709 time-expressions in the entire corpus, 855 (23%) were of the type we defined as "temporals", and of these, most were **deictic** temporals (622 in all). Table 3 presents the distribution of deictic temporals as they interact with verb-tense. Note that the term "congruent" here refers to co-occurrence of verb-tense and time-adverb in a given clause. Thus, a clauselike ani holex axshav 'I go now, I'm going now' shows a **congruence** of present-time adverb with present-tense verb, while clauses like *ani holex etmol 'I go yesterday' or ani holex od meat 'I go/am going soon' are both non-congruent, since they have nonpresent time-adverbs with a present-tense verb. But while the first is ungrammatical, the second is wellformed. In other words, congruence is not the same as grammaticality. Rather, it denotes double-marking of single time-reference by both verb-tense form and by time-adverb.

Table 3 - Overall distribution of deictic time adverbs by verb-forms:

ADVERBS	VERB - FORMS			TOTAL ADVERBS
	Congruent	Noncongruent	No Verb	
Present	157	142	192	491
Past	48	5	10	63
Future	20	20	28	68
	225	167	230	622

Table 3 shows that across the entire population, present-time related adverbs are by far more common that those which refer to future or past, accounting for nearly 80% of all such words. Moreover, present as well as future time-adverbs show an almost even distribution across types of verb-marking. They occur almost equally in the three different contexts of: (i) clauses we defined as "congruent", which have a verb inflected for the corresponding tense - e.g. a present time-word with a present-tense verb; (ii) clauses which have a verb marked for some noncongruent tense - e.g. a present time-word with a future or past-tense verb; and (iii) clauses which have no overt verb at all - e.g. hu ka- rega baxuc 'he outside now = he's

outside now' or hem od- me'at muxanim 'they soon ready = they'll be ready soon'. As against this, past time adverbs are, across the sample, very largely linked to clauses which also contain verbs marked with a past-tense inflection. The breakdown of these interactions by age-group is shown below.

Table 4- Interaction of deictic time-adverbs with verb-forms by age:

Age-Group	PRESENT ADVERB			PAST ADVERB			FUTURE ADVERB			TOTAL ADVERBS: #CLAUSES
	Cgr	Ncgr	NoV	Cgr	Ncgr	NoV	Cgr	Ncgr	NoV	
I (1;0-1;5)			2							2: 1,544
II(1;6-1;11)		1	2							3: 2,421
III (2;0-2;5)	13	9	39				2	8		71: 5,007
IV(2;6-2;11)	29	23	52	3			3	3	7	120: 4,242
V (3;0-3;5)	20	21	23	1	2		1	1	6	75: 3,577
VI(3;6-3;11)	36	32	34	13		3	6	5	7	136: 4,139
VII (4;0-4;5)	18	36	16	19	1	4	5	2	3	104: 2,385
VIII (4;6-5;6)	41	20	24	12	2	3	3	1	5	111: 2,720

Cgr = congruent, **Ncgr** = noncongruent, **NoV** = verbless

The above figures show that up to age two (Groups I and II), almost no deictic temporals are used; these few are only of present reference; and they occur in clauses which have no present marking on the verb. From age two years on (Group III and up), there is a clear rise in total number of temporals, but nearly all are still associated with the present. And again, many of them serve as the **only** markers of present time-reference. Future adverbs occur for the first time in Group III (age two to two-and-a-half), mainly with "noncongruent", nonfuture marked verb-forms. In Group V, from age three, present time-adverbs are for the first time used to the same extent with a present-tense verb as with nonpresent verbs or with no verb. Next, in Group VI (age three-and-a-half to four), we observe the first occurrence of several **past** time adverbs. These are used largely together with a past-tense verb, a pattern of double-marking of the past which persists from this age and up. Note, finally, that past time adverbs almost never occur with nonpast verbs, in marked contrast to the relatively large numbers of "noncongruent" verb/adverb occurrences in present and future. We will argue that this is indicative of a quite general distinction between the past tense and the others.

Discussion

In interpreting these findings, consider, first, the choices imposed on children by the formal devices employed by their language to express notions of temporality. Given that Hebrew verbs must be inflected for mood or tense (as shown in Table 1), our children were found to use a variety of different verb-forms from the very youngest age - including past, present, and future. But the early emergence of tensed forms does not necessarily mean that these children are already making clear distinctions in setting events along the time-line. On the contrary, the claim that mere occurrence of surface forms is not in itself evidence of children's ability to encode temporal notions is well supported by our analysis. Firstly, in quantitative terms, the relative proportion of the different verb forms changes with time. Thus, nonfinite imperatives and infinitives are common mainly in the speech of younger children, while use of past-tense shows a marked increase over the years - once at age two and then again at around age four. Yet these figures in themselves fail to account for a major qualitative shift in children's later deployment of verb-tense markings. Thus, further analysis of verb-tense forms as interacting with the variables of verb-content and time-adverbs reveals that genuine acquisition of the semantics of anteriority applies only to the older children in our sample, from age four on. It is only at this age that children make free use of past-tense across different verb-classes. And it is at this age, too, that time-adverbs which make reference to the past emerge as an additional, and overlapping, means of talking about past events.

Consider, next, the interrelation between the linguistic categories of mood/tense in the endstate grammar, on the one hand, and the developmental patterning of these categories in child language, on the other. Our findings suggest that accepted analyses of adult systems of encoding time may not directly mirror how children categorize form/meaning relations in this domain. The traditional division of the system into nonfinite infinitives and imperatives as opposed to the time-related categories of present, past, and future respectively is not supported by our developmental data. For one thing, so-called present-tense forms combine with the nonfinite imperatives and infinitives as predominant in early verb usage, until around the middle of the third year. Secondly, the three forms of present, past, and future each manifests a distinct de-velopmental pattern. It is thus hardly feasible to treat them together as constituting a homogeneous, tripartite system, as has been done in the description of Modern Hebrew (e.g. Rosen 1966, Rubinstein 1980, although a rather different analysis is suggested in Berman 1978b). Recall that in our sample, occurrence of present and future forms remains largely constant across the entire preschool age-range - albeit at two very different levels - whereas past forms, and they

alone, show a clearly cumulative pattern of growth.

This leads to a further point: The special status of the category of **past** in Hebrew child language - perhaps in child language in general. Not only are past forms unique in alone manifesting a clear developmental curve, the past is also the only category which occurred consistently and almost exclusively with time-adverbs that are clearly anterior in reference. Besides, past tense is the only category which we found to be tied to specific types of verbs in the early years. Clear evidence of children's ability to talk about the past as an experiential category unconnected with the specific nature of the event is available from only as late as age four. This can be interpreted as providing at most only partial, and quite indirect, evidence for what has been termed "the defective tense hypothesis" - particularly if we recall that in Hebrew, which has grammatical marking of time but not of aspect on the verb, verb-semantics plays a role in the acquisition of past tense, and of it alone.

As for **present tense**, it was used with great consistency, and was very widespread across the entire sample. The nonexclusive use of deictic time-adverbs with present-tense verbs combined with the lack of semantic specificity of the verbs occurring in present forms across the entire age-range suggests that the present is not clearly identifiable with a specific point in time. Rather, it has a temporally neutral, "default" status - as accords well with the fact that Hebrew grammar makes no formal distinction between generic or extended present and moment of speaking (compare, say, English "he makes dinner"/"he's making dinner"). **Future** tense verbs were used sparingly by the children in our study - possibly because future forms express modal as well as temporal orientations, and Hebrew-speaking children have numerous alternative ways of referring to the future - such as by means of the verb roce 'want' (the verb with by far the highest frequency in our sample), as well as many other modal and aspectual verbs used with an infinitive complement, and also by "noncongruent" use of future-reference deictic adverbs. Besides, in adult Hebrew as in English, present-tense commonly serves to express future intent, a fact which further supports our construal of the present as unmarked and of future-tense as peripheral in the expression of temporality.

In sum, we have tried to consider the development of linguistic marking of time apart from aspect. The overall picture we derive from our broad-based sample of naturalistic child speech confirms previous case-study findings regarding the centrality of imperative and infinitive forms in early verb-usage. We further noted that the three linguistic categories of present, past, and future do not constitute a single paradigm corresponding to three distinct slices along the timeline. From this we conclude that in the study of children's development of temporality in language, the more relevant and interesting questions concern not the relative order of acquisition of these three parameters, but rather the distinct patterning of how each one is deployed in and of itself, and in interaction with the others, as children learn to mark time (and, in most languages, aspect) in the grammar of their native tongue.

Notes

*This research was supported by a grant from the United States-Israel Binational Science Foundation (BSF), Jerusalem, Israel. Thanks are due to Inbal Gozes who organized data-collection, and to Smadar Elata, Galia Hatab, and Barbara Josman for their help in analysis and coding of data.

[1]In our analysis, we distinguished between future tense-forms used as such, and their use in place of more normative imperatives in certain subclasses of verbs, e.g. tavi means either 'you'll-bring' or 'bring!'.

References

Ames, Louise Bates. 1976. The development of the sense of time in the young child. Journal of Genetic Psychology 68, 97-125.

Berman, Ruth A. 1978a. Early verbs: How a child uses her first words. International Journal of Psycholinguistics 5, 1-25.

-----,1978b.Modern Hebrew Structure. Tel-Aviv: University Publishing.

-----,in press. Acquisition of Hebrew. In: Dan I. Slobin, ed. Cross-linguistic Study of Child Language. Hillsdale, NJ: Erlbaum.

Bickerton, Derek. 1981. Roots of Language. Ann Arbor,Mich: Karoma.

Dromi, Esther. 1982. In pursuit of meaningful words: A case-study analysis of early lexical development. University of Kansas doctoral dissertation.

Fillmore, Charles J. 1975. Santa Cruz Lectures on Deixis. Reprinted by the Indiana University Linguistics Club. Bloomington, Indiana.

Harner, Lorraine. 1980. Comprehension of past and future reference revisited. Journal of Experimental Child Psychology 29, 170-182.

Hornstein, N. 1977. Toward a theory of tense. Linguistic Inquiry 8, 521-557.

Kaplan, Dafna. 1983. Order of acquistion of morpho-syntactic categories by Hebrew-speaking children aged 1;9 to 3;6. Tel-Aviv University master's thesis [in Hebrew].

Rosen, Haim. 1966. Good Hebrew. Jerusalem: Kiryat Sepher [in Hebrew].

Rubinstein, Eliezer. 1980. Contemporary Hebrew and Ancient Hebrew. Tel-Aviv: Open University [in Hebrew].

Sachs, Jacqueline. 1982. Talking about the there and then: The emergence of displaced reference. In: K.E.Nelson, ed. Children's Language, Vol. 4. New York:Gardner Press.

Weist, Richard M. 1984. Tense and aspect: Temporal systems in child language. In: P. Fletcher & M. Garman, eds. Language Acquisition: Studies in First Language Development (2nd edition). Cambridge: Cambridge University Press.